

# SPRAGUE

THE MARK OF RELIABILITY

a GK Technologies subsidiary

AUGUST, 1980

# LOG

## A TOUGH YEAR AHEAD — THEN A BRIGHTER FUTURE

Lennox N. Lee

The onset of the economic recession arrived like an unexpected thunderstorm and washed away the hopes for continuation of first half 1980's record shipments, employment, and prosperity. Sprague and competitors alike have reduced their shipment forecast for late 1980 and early 1981. Pressure on the factories to hire more people and work longer hours is shifting quickly to material cost reduction, reduction of overtime and, unfortunately, some lay offs.

Although the onset of the recession was sudden, with its starting date officially decreed as January 1980 by the Bureau of Economic Research, the slowdown in the country's economic growth started in early 1979 when overall U.S. factory production as measured by the industrial production index flattened. Even so, orders for capacitors and components advanced to record highs which were soon followed by all out efforts to raise factory production to the new, larger amounts demanded by our customers. This apparent conflict between surging component markets and flat industrial factory production occurred because capacitors and component usage is heavily concentrated in the capital equipment part of the overall economy which also expanded to new records despite the slowdown in overall factory production. The surge of capacitor and component orders came in early 1979, when our factories were already out straight, resulting in longer delivery lead times which in turn, forced customers to place even more orders to cover the additional delivery time period.

Unit orders and shipments reached their peak in June of 1979, and with some ups and downs, fell through in April of 1980 as the early recessionary pressures spread into the component industry causing some users to check the growth of their inventories and others to move toward outright inventory reduction. User capacitor inventories, as a result, are relatively modest, in control, and far below the huge excesses accumulated in the 1974 recession.

The full force of the recession hit the electronics industry in April, 1980. Our customers' orders for electronic end equipment dropped and they in turn reduced their orders for components and capacitors. Most economists expect overall economic activity to continue to fall until the end of 1980 or early 1981, before a sluggish recovery begins. The capital goods industry, including most kinds of electronic end equipment, is expected to follow the course of the economy.

Components and capacitor shipments are expected to follow the course of the capital goods and electronic end equipment industries described above. Shipments are expected to drop in the second half of 1980 and to continue depressed through much of 1981.

Periodic recessions have plagued most of the world's economies for centuries, but governments so far failed miserably in their efforts to smooth out the recurring peaks and valleys. The United States has experienced about 25 recessions in the last 100 years. This present recession will probably be not much easier or much harder than the others. It may be easier for the capacitor industry than during the 1974 recession, because users apparently have kept their inventories under better control and extended periods of severe user inventory reduction will probably not occur.

Nonetheless, the next year or so will be tough and it will require the best efforts of all of us. Production and shipments will probably fall throughout the industry and all major competitors, including Sprague, will compete hard to keep their factories as busy as possible. Not only will production fall, but competitive pressures may push prices lower, later in the year.

While none of us can do much about the economic recession, we can all help compete for business by working more efficiently to offset some of the expected price reductions and to meet shorter, more demanding deliveries demanded by our customers. Whatever can be done here, will ease the problem for all of us. Sprague has done much to prepare for this recession and with a little added effort by all of us,

the Company will meet this challenge and maintain profitable operations.

After the recession, greater production capacity will be required to meet the growth opportunities expected to resume as soon as the excesses and imbalances that led to the recession are eliminated.

It is ironic that plans for this growth must proceed while the recession is still young and production is expected to decline. Nonetheless, the future looks better than the past for capacitors and for Sprague, and we expect to obtain our fair share of this growth. The better we are able to supply, service and compete for customers during the recession, the better will be our chances to capture a fair share of the growth opportunities of the early 1980's.

## CONCORD NOTES

Norman B. McWilliams

In the upcoming issues of the LOG, we would like to introduce you to some of the various committees that are active in the Concord Plant dealing with Energy Conservation, Plant Safety, Suggestions, VECR Program and other related programs.

In this issue, we would like you to meet Terry Clapp. Terry is a Senior Engineering Technician in the Transistor Final Test Department and is very energy conscious. He is also the Chairman of the Energy Conservation Committee in Concord. This is rather unique, because as far as we know, Terry is the only hourly employee who heads up a committee like this in the various Sprague locations.

## THE ENERGY GAME

Terry Clapp

It is a game we all should play, because we all will be affected by the final "score." It is a game we cannot afford to lose.

The Energy Conservation Committee at Sprague Concord has been proudly successful at doing just that — conserving energy! The committee is organized into sub-committees covering such items as ovens, D.I. water, personal comfort, steam, conservations at home, etc. These groups, assisted by the efforts, ideas, and cooperation of all the employees at Concord, have made a difference! For example, energy usage for process ovens has been reduced by 30% and steam costs have been reduced by 35%. These represent significant energy savings and are only a part of the total energy savings to date. The game is still in the early innings, however, with the real challenges still ahead.

Energetic minds score in the game of Energy Conservation. Put yours into play, at work as well as at home, and put those wasted dollars to better use.



*Terry Clapp congratulates Carlene Dow, second shift Department Leader in Transistor Final test on her excellent idea for correcting the Plant's Power Factor.*

## WICHITA FALLS INSTITUTES TORNADO WARNING SYSTEM

Albert L. Zigler, Jr.

April 10, 1979 is the day known to the Sprague Electric Company employees in the Texas community of Wichita Falls as "Terrible Tuesday." It was the day that will be remembered as one of the most destructive tornadoes in our country's history swept through the city of over 100,000 people.

Since that happened over a year ago, the community has been rebuilding a stronger and better environment in which to live. This effort has been aided by many generous and caring supporters (over \$100,000 to our employees and the community by the Sprague Electric Company).

Rebuilding also means implementing a better severe storm warning and reaction system, especially during the tornado season. The Sprague Electric facility in Wichita Falls has established such a system for its employees.

Located in the plant are a well-equipped centralized Command Post and designated shelter areas. There are weather alert radios which transmit warning signals when a severe weather alert is issued by the National Weather Service. These radios are located in the security guard station, in the Manufacturing Manager's office, and in the Industrial Relations Manager's office. This is to insure around-the-clock notification for a three-shift operation.

In the event that the National Weather Service issues a tornado watch (conditions are favorable for tornadoes to develop), or a tornado warning (a tornado has been spotted), personnel assigned Command Post responsibilities are put into action. Information received from various city and state agencies is monitored by a pre-programmed 10 channel screener. Trained spotters are issued flashlights/transceivers and dispatched to pre-designated areas to watch for tornadoes. Trained supervisory monitors are issued flashlights/transceivers and return to work areas to inform and direct employees.

The Wichita Falls employees have reacted to directions in a calm and orderly manner. Considering the emotions resulting from last year's experience this is no small feat. Credit is to be given to the employees and the Wichita Falls management team for their preparedness.

## SEMICONDUCTOR DIVISION EXPANDS ITS ACTIVITIES TO PHILIPPINE ISLANDS

D. F. McGuinness

As a result of the recent growth and increased requirements expected, the Semiconductor Division is in the process of buying a controlling interest in an assembly plant in Manila, Philippines. Our local partner will be Mr. R. C. Silverio, President of Delta Motors there.

The plant now makes many of the products required in Worcester and will be making transistors that previously were assembled in Korea. Mr. Fred Reiersen is Managing Director of our Semiconductor activities there and is assisted by Mr. Matt Caldwell. Both are from the Worcester plant.

The plant is an ultra-modern, 20K sq. foot, clean operation with the latest automatic and semi-automatic assembly equipment available. It also has two Teradyne test systems; one for IC's and one for transistors which will allow testing and shipping the finished product directly from the Manila plant to customers in the Far East and Europe at considerable savings. We now have a Semiconductor Applications Center in Hong Kong servicing customers there and a similar center is planned for Europe in late '80.

This is all part of the worldwide program for Semiconductor growth.

## INJURY FOSTERS NEW CAREER

"Every cloud has a silver lining." We've all heard that many times and while it may not be true for all of us, it certainly was for Doris Mimno, a Scientific Secretary in North Adams.

Doris' introduction to painting was a result of a serious knee injury. With her knee in a cast, unable to work and time on her hands, she

became very depressed. But, thanks to a friend who brought her oil paints, easel, canvas and books on painting, she launched a whole new career.

Doris didn't really consider the idea of painting seriously at first, but decided to try it one day when she was very bored. After experimenting for a while she soon joined the Adams Art Association where she met a lot of helpful people. Next, she began taking lessons from a local artist who worked with her at improving her drawing and later, was introduced to the William Schultz Art School in Lenox, Massachusetts. It took a lot of courage to enroll in the school since everyone in the classes was so much more advanced than she was and most had been painting for 15 or 20 years. She has been attending classes for over three years and the results have been most gratifying. She has exhibited her paintings throughout the area including the Berkshire Museum, the Art League Show, Adams Art Show, North Adams Fall Foliage Show and the Wells Gallery in Massachusetts, the Ogunquit Art Show in Maine, Bennington Art Show and the Southern Vermont Arts Center in Vermont, as well as exhibits in local banks and libraries. She captured first, second and third prizes at many of these shows and continues to exhibit.

Doris feels that her painting has intensified her awareness of the beauty that surrounds her and that it has greatly enriched her life. Her only regret is that she didn't attempt it years ago. She feels she leads an exciting life and is never bored as long as she can paint.

Doris has her own studio in her home and has pupils one night a week. She's a 30-year employee of Sprague Electric and plans to devote a great deal of time to her painting when she retires.



North Adams Employee Doris Mimno displays three of her paintings.

## SPRAGUE ELECTRIC LOG ISSUE 2, 1980

Norma M. Hays, Editor

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Brownsville  
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Paul F. Sprague — Photographer

## SPRAGUE PRODUCTS COMPANY RECEIVES GOLD AWARD

The Sprague Products Company, Distributors' Division of the Sprague Electric Company, received a gold award from the Electronic Industries Show Corporation in recognition of excellence in "pre-show and at-show promotion" for the annual Electronic Distribution Show which took place this year in Las Vegas, Nevada, May 1 thru 3.

The award was based on an objective measurement of an exhibitor's activities to build attendance at the show at its own ex-

hibit. Points were awarded for field sales force involvement, appointment making programs for distributors, pre-show direct sales promotion, and pre-show magazine space advertising to stimulate attendance as well as the following of the show theme in an exhibitor's displays, special show product promotions, etc.

Sprague Products received the gold plaque for accumulating more than 100 points in the competition.

## RALPH N. LAUGHLIN NAMED ASSISTANT DIRECTOR

Ralph N. Laughlin, who has been Manager of our district sales office in Huntsville, Alabama, has joined the Corporate Advertising and Sales Promotion Department as Assistant Director.

Ralph joined Sprague Electric early in 1979 from Fairchild Camera and Instrument Corporation, where he had been senior account executive for the Southeastern United States. Previous to joining Fairchild, he had been with Texas Instruments, Inc. in

various sales, purchasing, and marketing posts in New England, Tennessee, and Texas.

Ralph is a journalism graduate of the University of Iowa and spent some ten years with the General Electric Company in various advertising and sales promotion posts in Schenectady, Phoenix, Washington, D.C., and Roanoke, Virginia. While with GE, he completed their advertising and sales promotion training course.

## SPRAGUE AND SIGNETICS IN JOINT PROGRAM

The Sprague Electric Company's semiconductor division announced that it has entered into a joint program with the Signetics Corp., Sunnyvale, California, to develop an integrated circuit for AM/stereo radio.

The announcement follows the recent adoption by the Federal Communications Commission of the AM/stereo radio system originated by the Magnavox Consumer Electronics Co. The approval of AM/stereo broadcasting in the United States is expected to later open a vast new market worldwide, particularly in areas where FM reception is poor or non-existent. The new silicon chip, to be available later this year from both Sprague and Signetics, is being designed for use in both auto and home stereo systems.

"The joint program to furnish fully compatible IC chips from two sources is expected to speed the design time for AM/stereo radios

and will considerably shorten the time before they are available in the marketplace," according to Robert F. Milewski, Sprague's product manager for entertainment and linear integrated circuits. According to Louis Johnson, Signetics' marketing manager for the new devices, "the new IC chips have been designed to work in conjunction with existing AM (amplitude modulation) IC chips presently used in the front end of radio sets, such as the Signetics TCA440 and the Sprague ULN-2239 and ULN-2137. Combination of the new chip, to be available from both companies, together with the present AM front-end chips makes it quite simple to produce a two-chip AM/stereo radio."

Details on the final circuit design have not been revealed, but will be made available to prospective set manufacturers later this summer.

## SPRAGUE "A" TEAM UNDEFEATED

The Sprague "A" team in the Northern Berkshire YMCA Basketball League capped an undefeated season by defeating Captain's Table in the "A" Division playoffs. Former North Adams

State College star, Monty Flynn paced the Sprague team throughout the season and was given strong support by the all veteran team that also won the league in 1979. Their league rec-

ord over the two-year period is 32 wins, 1 loss. Team members include Jerry Moorman, Al Giorgi, Timmy Austin, Fred Thompson, Jim Borowski, Mark Irby and Bob Bence.

The Sprague Electric Team in the "C" Division of the YMCA League also finished the season on a positive note as they compiled seven wins after having lost

their first five games. Their final record was seven wins and seven losses. This team included Sprague employees Ron Boucher, Steve Florio, Mike Hamblin, Michael Hynes, Bill Hein, Geoffrey King, Mike Moore, Mark Palmer, Don Riley and Richard Robinson.

Congratulations to both teams for an excellent season.

## 1980 HOME AND TRADE SHOW

The 1980 Northern Berkshire Home and Trade Show was a tremendous success thanks to the many Sprague employees who dedicated themselves to the designing, implementation and manning of the Show. Overall, the 1980 Home and Trade Show was highly successful with over 7000 visitors, most of whom visited the Sprague booth.

Our theme was "Sprague Salutes Sports." The display contained several pictures of sporting teams and sport-related activities. Also, there was a trophy and plaque panel and a sportswear and gear panel. It was very nicely done and quite appreciated by many who tried to find their faces in the displayed pictures.

Baseball caps were given away as prizes every half hour. A total of 76 hats were awarded to the fortunate prize-seekers. The grand prize was the awarding of two 10-speed bicycles. Winners were Jack Mullen of Pittsfield and ten year old Mark Randall of Adams who was quite elated when he came to pick up his new bike.



## TRAINING — HOW IT RELATES TO EMPLOYE RELATIONS

George H. Bateman

People make a company. Buildings and machines are necessary for producing a product, but the greatest asset a company has is its people. From the profound responsibilities of top management to the routine work of entry level jobs, every employee has a special role to play in making the organization go.

Because all of us as employees rely on each other for so many things, how we feel about each other and ourselves in our work environment is of major importance. Therefore, to encourage harmonious relations among all employees and to enhance individual satisfaction on the job, companies create employee relations policies. These policies in essence represent a company's philosophy of work life, and one of the key elements in determining the success or failure of these policies is training.

Studies show that the vast majority of people like to do a good job at whatever they are doing. To be considered a pro by others at a particular skill is an accolade none of us would likely refuse. The trick for industry is to provide the kind of work environment which motivates people to do a good job. Motivation is a very complex, controversial and often misunderstood concept, yet those who study such things agree that without proper training the initial enthusiasm and motivation one may bring to a job fades very quickly.

Someone once said, "It's not what you do, but how you do it that counts." All of us know that exhilarating feeling that sweeps over us when we have done something especially well. It might be a good ski run down a mountain, repairing a car, or completing a crossword



puzzle, but whatever creates it, the feeling of accomplishment is a real high and it is habit forming.

Training is the means to accomplishment. It provides people with the opportunity to learn their jobs well and derive satisfaction from good results. It also gives people the chance to acquire new skills and knowledge which expands their potential and may lead to setting higher personal goals and achieving greater accomplishments.

Personal satisfaction gained from achievement is one of the most influential human needs in a normal work environment. Training can help fulfill that need. It is a primary employee relations function.

## QUALITY — A WORD OF MANY MEANINGS BUT ONE MESSAGE

C. F. Jost

In today's international arena of electronic components manufacturing, we must recognize that we are being confronted by competition in an area that we have no choice but to meet head on, and that is the area of quality. It is becoming increasingly clear that higher levels of product sales are being enjoyed by those manufacturers who are achieving lower levels of quality rejections and failures in the marketplace. Of equal importance is the fact that endeavors by companies to improve their quality performance are resulting in reductions of their costs and increases in productivity (more good parts, fewer rejects).

Quality is a word we hear quite often these days. People talk about good and bad quality. We frequently see it in advertising. Indeed, many companies even incorporate it in their names. Mention of the word quality is likely to cause most of us at Sprague Electric to think of quality control or QAR. But what does the word mean, and what does it encompass?

To those who use our products, quality means fitness for use. Their evaluation of quality is based on whether a product is fit for their use when they first receive it and on whether it continues to be fit over some expected period of time (the idea of fitness over a period of time is what we really mean by the term reliability). Those of us in the profession of quality control could state a more formal definition if you like, such as, Quality — the ability of a product or service, considering the totality of its relevant features and characteristics, to satisfy a given need.

There are other meanings too. We can talk about quality of design. By this we mean the excellence of a design compared to the customer's requirements or its excellence in relation to the ease of manufacture by production. Quality of design includes the design itself and the specified materials and process specifications because these express in measurable terms the producer's judgment of the user's requirements. Quality of manufacture is another concept. By this we mean the fidelity with which the physical product conforms to the design as a result of the manufacturing process. Then there is quality of conformance — the fidelity with which a product conforms to the specified requirements. This is what we are assessing when QAR does its qualification tests, incoming and in-process inspections, process audits, final tests, environmental and reliability tests.

The above are a few examples of some of the meanings of quality we must be concerned with. There are others, but in the final analysis they all derive from one concept which is the essence of the word in today's industry, and that is quality of commitment — the long term company-wide effort, from top management to the men and women on our production lines — to make our products better. If we are to meet our competition head on we must achieve the making of positive quality mindedness a way of life in our corner of the arena.

In a recent article by Philip Crosby in *Quality* magazine, he stated it quite clearly. He said "... out there other countries and other cultures are after your market. They are after your customers and after your income. They are working strictly on the basis of setting good requirements and then spending all their time trying to meet them."

## SPRAGUE IC ACHIEVES WORLD-WIDE ACCEPTANCE

The Sprague ULN-2204A integrated circuit is a silicon chip measuring only 0.071" x 0.084". However, this small component contains almost all of the circuitry required for a complete AM/FM radio (2 transistors are still required for the FM tuner). This low-cost, high-technology chip is manufactured at the Semiconductor Division facilities in Worcester, Massachusetts. They are then assembled in the Philippines and returned to Worcester for sale world wide.

At any instant, more than 250,000 parts are being processed for an expected yearly total of almost 2 million radios using the ULN-2204A. These radios are presently being manufactured in Germany, England, Mexico, Singapore, Taiwan, and Hong Kong and might be sold with any one of many brand names. For example, in South America — Majestic or Philips; in North America — Sears, Lloyds, Midland, Electrophonic, Realistic, Sharp, J. C. Penney, etc.; in Europe — Braun, Fidelity, or Sinclair; and in the Far East — Juliette, Panasonic, and many others.

## MANAGEMENT CHANGES

Management changes since our last publication include:

Barre:	Michael Hutchinson, Division Quality Control Engineer
Clinton:	Sherrill Dutton, Equipment Design Engineer
Concord:	Richard Jewell, Jr., QAR Foreperson
Grafton:	Beverly Luebke, Production Foreperson; Mark May, Production Foreperson; Dennis Kriese, Manpower Control Analyst
Hillsville:	Raymond P. Caudell, Product Engineer
Lansing:	Bobby L. Johnson, Cost Standards Analyst; Jackie Hardin, Section Head Work Factor/Manpower Control
Nashua:	Alan Beck, Process/Product Engineer; William Konopka, Methods and Planning Engineer
North Adams:	Cyrus George, Technical Support Specialist; Gilbert McNicol, Plant Accountant; Arthur F. Barry, Jr., Cost Standards Analyst; James S. Zieba, Operations Analyst/Fleet Administrator; John W. Kovolski, Production Foreperson; Ralph Laughlin, Assistant Director Advertising, Sales Promotion; James F. Quinton, Corporate Purchasing Administration Auditor; Otto Wied, Plant Manager; Nancyanne LaMarre, Programmer Analyst; Dyan Wiley, Market Research Analyst; Judith Wojtaszek, Buyer; Thomas Hurley, Manager Process Engineering; Christopher Loftus, Programmer Analyst; Louis R. Scalise, Dept. Head of Manpower Control; Peter Wol, Production Manager; Carol A. Hayes, Filter Department Customer Service Representative
Orlando:	Neil Tanguay, Foreperson-Shipping
Sales:	William L. Guinn, District Sales Manager-Huntsville, Ala.
Sanford:	Sheila Richard, Cost Standards Analyst; Sam Spencer, Manufacturing Engineer; Christopher Culen, Process Engineer
Visalia:	Lon Hembree, Production Foreperson; William B. Merk, Manufacturing Engineer
Wichita Falls:	Jack R. Bush, General Marketing Manager; Anthony Harrison, Production Foreperson; Marcus Lee Hill, III, Programmer Analyst; Michael Ashley, Manpower Control Analyst; Charles B. Ward, Materials Engineering Manager; Rolland McClelland, Sr. Process Engineer
Worcester:	Richard C. Cook, III, Semiconductor Design Specialist; Richard Kneeland, Product Design Engineer; Mansour Nouriel, Product Design Engineer; Frederick Reisor, Plant Manager, Henry A. Ellsworth, Production Superintendent; Robert A. Curtis, Production Superintendent; J. Gerard F. Bouchard, Manager Product Engineering

## ARTS AND CRAFTS EXHIBITED

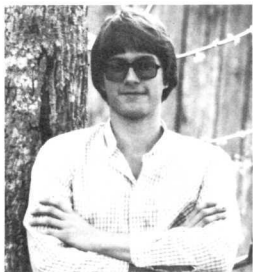
Both Nashua and Concord plants featured an "OMOT" (On My Own Time) arts and crafts show at their facilities this Spring. Creative works of art were submitted by employees of both plants and winners went on to exhibit their works in a region-wide exhibit at the Manchester Institute of Arts and Sciences in May.

Winners at Concord were Beverly Merrill, Judith Flewelling, Carolyn Wheeler, Geraldine Schlehuber, Kristal Martell, Ralph Mecheau, Harold Mahar, Jr., Dale Morency, Herman Roy, Christopher Landry and Pamela Young. "Best In Show" award was won by Ralph Mecheau, while Geraldine Schlehuber won the employees' vote.

Nashua winners were Terri Dionne, Debra Evans, Elsa Kam-Lum, Mary C. Kocinski, Lorraine Proulx and Betty Ulbin. Nashua's "Best In Show" award went to Mary C. Kocinski.

Company coordinators for the shows were Norman McWilliams at Concord and Betty Ulbin at Nashua.

# 1980 SPRAGUE ELECTRIC SCHOLARSHIP WINNERS



## ASHE COUNTY

Robert Sturgill, son of Jack Sturgill and John Roberts, son of John and Madge Roberts were awarded \$400 per year for four years; Sandra Powers, daughter of Ronda Powers was awarded \$300 for four years; Cathy Ballou, daughter of Meredith Ballou was awarded \$100 for two years.



## BARRE

Gail Cushing, daughter of Margaret Cushing and Todd Paton, son of Oland Paton were awarded \$250 per year for four years.

## CONCORD

Claire Yasewicz, daughter of Thomas Yasewicz was awarded \$400 per year for four years. Victoria Whitten, daughter of Donald Whitten recipient of \$800 per year for four years.



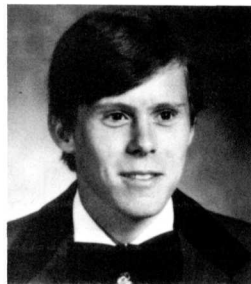
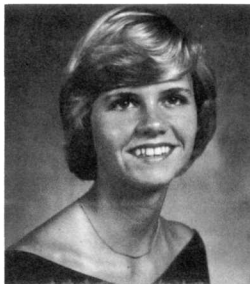
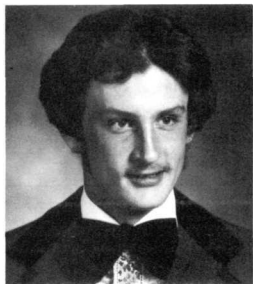
## CLINTON

William E. Williams III, Industrial Relations Manager, presented scholarship awards of \$200 per year for four years to Mary Elizabeth McManus, daughter of Ron McManus and Glenda Lee Miller, daughter of Leon L. Miller.



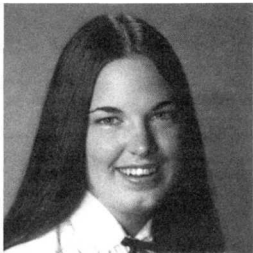
## GENERAL SCHOLARSHIP WINNER

The General Scholarship of \$400 per year for four years was awarded to Edward A. Brogden, Jr., son of Edward A. Brogden, Cherry Hill, NJ Sales Office.



## HILLSVILLE

Scholarships of \$250 per year for four years were awarded to Tammy Marie Coble, daughter of Carlton and Audine Coble, Gregory G. Goad, son of Zelma Goad, Janice Lee Pendergrass, daughter of Bobbie Pendergrass and Timothy Marshall, son of Vernon and Wanda Marshall.



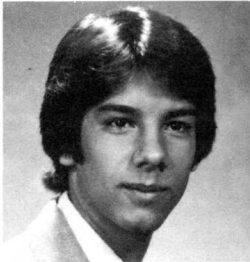
### NASHUA

Nashua Scholarship Winners were Annette Dionne, daughter of Camille Dionne, who received \$300 per year for two years, and Paula Theberge, daughter of Roland Theberge who was awarded \$300 per year for four years.



### SANFORD

Robert W. Poitras, Plant Manager, shows capacitors manufactured in Sanford to the three Sanford Scholarship winners - L to R, Erin O'Brien, daughter of Margaret O'Brien, who will receive \$750 per year for four years; Kelly Spencer, daughter of Sam Spencer, awarded \$375 per year for four years and Elaine Glover, daughter of Charlie Glover, who will receive \$375 per year for four years.



### VISALIA

Teresa Howard, daughter of Penny Howard, \$150 per year for two years. Martin Schumacher, son of Charles Schumacher, \$150 per year for two years.



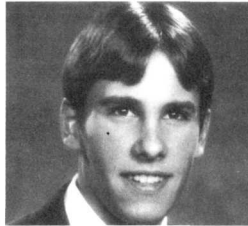
### WICHITA FALLS

Gloria Bohannon, Assistant Industrial Relations Manager, presents scholarship to Donna Heron, daughter of John Heron. She was awarded \$600 per year for four years.



# LOG

BULK RATE  
U. S. POSTAGE  
PAID  
North Adams, Mass.  
Permit No. 94



Donald Morin



Jennifer Jones



Jean Howe



Barbara Stone



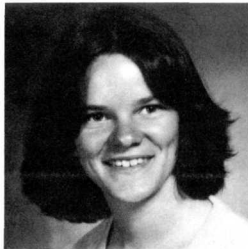
Ann Fresia

### NORTH ADAMS



Barbara Pitkin

Donald Morin, son of Victoria Morin, was awarded \$600 per year for four years; Jennifer Jones, daughter of Bernadette Jones and Jean Howe, daughter of David Howe, will receive \$500 per year for four years; Ann Fresia, daughter of Jim Fresia, Barbara Stone, daughter of Edward Stone and Barbara Pitkin, daughter of Stanley Pitkin, were awarded \$300 per year for four years.



### WORCESTER



Susan M. Milewski, daughter of Robert F. Milewski was awarded \$200 per year for two years; Melissa A. Howe, daughter of Shirley A. Howe was awarded \$200 per year for four years; Brian R. Houde, son of Donald S. Houde, Micro-Tech and Alice G. Houde, Worcester, was awarded \$400 per year for four years.